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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,950

Applicant(s)

BOURIANT, ALEXANDRE

Examiner

JASON LIN

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-912)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 20-41 are presented for examination. Applicant filed an amendment on 11/30/2010 amending claims 20, 32 and 38. In view of Applicant's amendment, the Examiner withdraws the claim objections and the grounds of rejection of claims 20-41 under 35 U.S.C. 103. However, new claim objections and new grounds of rejection of claims 20-41 necessitated by Applicant's amendment are established in the instant office action as set forth in detail below.

Response to Arguments

2. Applicant's arguments with respect to claims 20-41 have been considered but are moot in view of the new ground(s) of rejection.

3. In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, please see the rejection below for detailed teacher/motivation to combine the references.

Claim Objections

4. Claims 20 and 32 are objected to because of the following informalities:
"integrate a value provided to the multiplier" should be "integrate a value provided by the multiplier". Appropriate correction is required.
5. Claim 38 is objected to because of the following informalities: "integrating a value provided to a multiplier" should be "integrating a value provided by a multiplier". Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20-24, 26, 30, 38-39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), further in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), further in view of US 20010039519 to Richards.

As per claim 20, Kruk substantially discloses:

- ***at least an optimization entity for influencing at least a process parameter***
(Kruk, [0120]);

- ***at least a monitoring entity for monitoring entity for monitoring the process parameter*** (Kruk, [0009]);
- ***at least an evaluation entity for determining an optimization of the process parameter, wherein the optimization is effected by the optimization entity*** (Kruk, [0120] and [0181]);
- ***the evaluation entity further comprising a comparator to compare a reference value of a specific process parameter with an actual value of the process parameter*** (Kruk, [0120] and [0193]);
- ***a difference between the reference value and the actual value*** (Kruk, [0120] and [0193]);
- ***process parameter*** (Kruk, [0120]);
- ***currently determined*** (Kruk, [0134] and [0077]);
- ***an optimization value*** (Kruk, [0120] and [0193]);
- ***a percentage factor, a percentage of optimization applied to the process parameter per optimization entity when more than one optimization entity is utilized*** (Kruk, [0120] and [0193]);

Kruk is silent regarding ***automatically determining an optimization, a reference time, a multiplier configured to apportion a difference between, an integrator configured to integrate a value provided by the multiplier over a time period, a memory device configured to retain prior to supplying the difference to the multiplier, a determined time, an optimization value integrated over a time period.*** However, Honarvar in an analogous art discloses ***automatically determining***

an optimization, a memory device configured to retain (Honarvar, abstract, col. 10 line 22-25 and col. 17 line 49-57).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

Neither Kruk nor Honarvar but Kolk ***a reference time, a determined time, an optimization value integrated over a time period, an integrator configured to integrate a value over a time period*** (Kolk, [0009] and [0063]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Kolk into the combination of combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to provide a real time estimation of actual cost savings during a selected period (Kolk, abstract).

None of Kruk, Honarvar or Kolk but Richards in an analogous art discloses ***a multiplier configured to apportion a difference between, a value provided by the multiplier, prior to supplying the difference to the multiplier*** (Richards, [0087] and Fig. 10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Richards into the combination of devices of Kruk, Honarvar and Kolk. The modification would be obvious

because one of the ordinary skill in the art would want to provide buying information and recommendations to help consumers purchase products (Richards, [0012]).

As per claim 21, the rejection of claim 20 is incorporated, Kruk further discloses the process parameter which must be optimized, and which is influenced by the optimization entity (Kruk, [0120]), where "the total cost associated with a procurement process" is the process parameter as claimed, ***is assigned an evaluation entity such that the optimization which is effected on the process parameter by the optimization entity can be determined by the evaluation entity*** (Kruk, [0181]), ***in real time*** (Kruk, [0134]), ***online*** (Kruk, [0075] and [0097]).

As per claim 22, the rejection of claim 20 is incorporated, Kruk further discloses the evaluation entity has at least one evaluation module for determining an optimization of a corresponding process parameter, wherein the optimization is effected by a specific optimization entity (Kruk, [0120], [0180] and [0181]), where "which products and/or services to purchase from which suppliers" is the specific optimization entity as claimed.

Honarvar further discloses ***automatically determining an optimization*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device

of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 23, the rejection of claim 22 is incorporated, Kruk further discloses the evaluation module is used for determining a cost saving which is effected in relation to a relevant process parameter (Kruk, [0120], [0180] and [0181]).

Honarvar further discloses ***automatically*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 24, the rejection of claim 22 is incorporated, Kruk further discloses evaluation modules in an evaluation entity which is assigned to a process parameter (Kruk, [0120], [0180] and [0181]). ***Optimization entities which influence the process parameter concerned*** (Kruk, [0120]). ***number of modules is dependent on the number of entity*** (Kruk, [0042]), where "scanning module 50...Optical character recognition module 54 is operable..." inherently shows that the number of modules is dependent on the number of entity, because while one module is

assigned to just one entity, there has to be more modules if there are a number of different entity.

As per claim 26, the rejection of claim 20 is incorporated, Kruk further discloses all evaluation entities are connected to an overall evaluation entity, such that the effected overall optimization of all process parameters can be determined by the overall evaluation entity (Kruk, [0178], Fig. 15 element 602, [0192], and [0195]).

Honarvar further discloses ***overall optimization of all process parameters*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

As per claim 30, the rejection of claim 20 is incorporated, Kruk further discloses a display entity for visualizing the effected optimization of the process parameter or for visualizing the effected overall optimization of all process parameters (Kruk, [0178], Fig. 15 element 602, [0191], [0192], and [0195]).

As per claim 38, Kruk substantially discloses:

- ***optimizing one or more process parameters by at least one optimization entity by comparing a reference value of a specific process parameter with an actual value of the process parameter*** (Kruk, [0120] and [0193]);
- ***a difference between the reference value and the actual value*** (Kruk, [0120] and [0193]);
- ***applying an independent percentage factor to each optimization entity when more than one optimization entity is provided to designate a percentage each optimization entity should provide*** (Kruk, [0120] and [0193]);
- ***monitoring the process parameters by at least one monitoring entity***
- ***determining the effected optimization of the or each process parameter by at least one evaluation entity*** (Kruk, [0120] and [0181])

Kruk is silent regarding ***automatically determining the optimization, apportioning a difference between the reference value and the actual value, integrating a value provided by a multiplier over a time period, retaining prior to supplying the difference to the multiplier, with values obtained from the multiplier.*** However, Honarvar in an analogous art discloses ***automatically determining the optimization, retaining*** (Honarvar, abstract, col. 10 line 22-25 and col. 17 line 49-57).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device

of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

Neither Kruk nor Honarvar but Kolk ***integrating a value over a time period*** (Kolk, [0009] and [0063]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Kolk into the combination of combination of devices of Kruk and Honarvar. The modification would be obvious because one of the ordinary skill in the art would want to provide a real time estimation of actual cost savings during a selected period (Kolk, abstract).

None of Kruk, Honarvar or Kolk but Richards in an analogous art discloses ***apportioning a difference between the reference value and the actual value, a value provided to a multiplier, prior to supplying the difference to the multiplier, with values obtained from the multiplier*** (Richards, [0087] and Fig. 10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Richards into the combination of devices of Kruk, Honarvar and Kolk. The modification would be obvious because one of the ordinary skill in the art would want to provide buying information and recommendations to help consumers purchase products (Richards, [0012]).

As per claim 39, the rejection of claim 22 is incorporated, Kruk further discloses a process parameter is optimized by one or more optimization entities (Kruk, [0120]), where "the total cost associated with a procurement process" is the

process parameter as claimed, **optimization which is effected on the process parameter by each optimization entity for the relevant process parameter is determined** (Kruk, [0181]), **in real time** (Kruk, [0134]), **online** (Kruk, [0075] and [0097]).

As per claim 41, the rejection of claim 38 is incorporated, Kruk further discloses when more than the at least one optimization entity is provided, each percentage factor, associated with a cumulative number of optimization entities, may not cumulatively exceed 1 (Kruk, [0193] and Fig. 15).

8. Claims 25 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), in view of US 20010039519 to Richards, further in view of US 6004579 to Bathurst et al. (hereinafter "Bathurst").

As per claim 25, the rejection of claim 22 is incorporated, Kruk further discloses evaluation module proved optimization values as output values (Kruk, [0180], [0181], Fig. 15, [0192], and [0195]). **allowing recording of the optimization which is effected for relevant process parameter by each optimization entity** (Kruk, Fig. 15, [0192], and [0195]).

Honarvar further discloses **time-related value** (Honarvar, col. 6 lines 48-54).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of Kruk, Honarvar, Kolk or Richards but Bathurst in an analogous art discloses ***absolute optimization value*** (Bathurst, col. 15 line 37-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bathurst into the combination of devices of Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to achieve the absolute optimization (Bathurst, col. 15 line 37-40).

As per claim 40, the rejection of claim 38 is incorporated, Kruk further discloses the effected optimization of all process parameters is determined online and/or in real time (Kruk, [0178], Fig. 15 element 602, [0192], [0194], and [0195]).

Honarvar further discloses ***optimization of all process parameters*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62), ***time-related value*** (Honarvar, col. 6 lines 48-54).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device

of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of Kruk, Honarvar, Kolk or Richards but Bathurst in an analogous art discloses ***absolute quantity*** (Bathurst, col. 15 line 37-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bathurst into the combination of devices of Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to achieve the absolute optimization (Bathurst, col. 15 line 37-40).

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), in view of US 20010039519 to Richards, further in view of US 20010017023 to Armington et al. (hereinafter "Armington").

As per claim 27, the rejection of claim 20 is incorporated, none of Kruk, Honarvar, Kolk or Richards but Armington in an analogous art discloses at least one time normalization entity is provided for normalizing time quantities (Armington, [0145]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Armington into the

combination of devices of Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to achieve the absolute optimization (Bathurst, col. 15 line 37-40).

10. Claim 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), in view of US 20010039519 to Richards, further in view of US 5402519 to Inoue et al. (hereinafter "Inoue").

As per claim 28, the rejection of claim 20 is incorporated, Kruk further discloses all process quantities which are used by all entities (Kruk, [0178], Fig. 15 element 602, [0192], and [0195]).

None of Kruk, Honarvar, Kolk or Richards but Inoue in an analogous art discloses ***at least one process-quantity normalization entity is provided for normalizing*** (Inoue, col. 26 lines 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Inoue into the combination of devices of Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to provide a system for learning or recalling optimized objects for learning/recalling (Inoue, col. 4 lines 10-12).

As per claim 29, the rejection of claim 28 is incorporated, Inoue further discloses the process-quantity normalization entity is used for normalizing variables or parameters (Inoue, col. 26 line 12-13 and col. 26 line 61-68).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Inoue into the combination of devices of Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to provide a system for learning or recalling optimized objects for learning/recalling (Inoue, col. 4 lines 10-12).

11. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 20030120528 to Kruk et al. (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), in view of US 20010039519 to Richards, further in view of US 20030061225 to Bowman et al. (hereinafter "Bowman").

As per claim 31, the rejection of claim 30 is incorporated, Kruk further discloses the display entity depicts the effected optimization of each individual process parameter online or in real time (Kruk, [0178], Fig. 15 element 602, [0191], [0192], [0194] and [0195]); ***display simultaneously*** (Kruk, Fig. 15), where the savings

for supplier A, supplier B, division A, etc. are displayed simultaneously; **dynamic** (Kruk, [0134]), where "real-time" inherently shows dynamic.

Honarvar further discloses **overall optimization of all process parameters** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the device of Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of Kruk, Honarvar, Kolk or Richards but Bowman in an analogous art discloses **spider diagram** (Bowman, Fig. 69 and [0374]), where the "radar plot" is the spider diagram as claimed.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bowman into the combination of devices of Kruk, Honarvar, Kolk or Richards. The modification would be obvious because one of the ordinary skill in the art would want to provide a diagram where the user can change the order of the layers by selecting an item in the legend (Bowman, [0374]).

12. Claim 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission (hereinafter "AOA"), in view of US 20030120528 to Kruk (hereinafter "Kruk"), further in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030139854 to Kolk et al. (hereinafter "Kolk").

As per claim 32, AOA substantially discloses:

- ***An MES (manufacturing execution system) device, wherein the MES device is connected between an enterprise and production planning system and a monitoring and control system*** (AOA, Background of the invention [0003]).

AOA is silent regarding:

- ***for optimizing processes***
- ***at least an optimization entity for influencing at least a process parameter***
- ***at least a monitoring entity for monitoring entity for monitoring the process parameter***
- ***at least an evaluation entity for automatically determining an optimization of the process parameter, wherein the optimization is effected by the optimization entity***
- ***the evaluation entity further comprising a comparator to compare a reference value of a specific process parameter with an actual value of the process parameter and a multiplier configured to apportion a difference between the reference value and the actual value***
- ***an integrator configured to integrate a value provided by the multiplier over a time period***
- ***a memory device configured to retain a difference between the reference value and the actual value prior to supplying the difference to the multiplier***

- ***wherein the evaluation entity is further provided a reference time, a currently determined time, and a percentage factor so that the at least one optimization entity produces an optimization value, an optimization value integrated over a time period, and a percentage of optimization applied to the process parameter per optimization entity when more than one optimization entity is utilized***

However, Kruk in an analogous art discloses:

- ***for optimizing processes*** (Kruk, [0120]);
- ***at least an optimization entity for influencing at least a process parameter*** (Kruk, [0120]), where "which products and/or services to purchase from which suppliers" is the optimization entity as claimed.
- ***at least a monitoring entity for monitoring entity for monitoring the process parameter*** (Kruk, [0009]);
- ***at least an evaluation entity for determining an optimization of the process parameter, wherein the optimization is effected by the optimization entity*** (Kruk, [0120] and [0181]).
- ***the evaluation entity further comprising a comparator to compare a reference value of a specific process parameter with an actual value of the process parameter*** (Kruk, [0120] and [0193]);
- ***a difference between the reference value and the actual value*** (Kruk, [0120] and [0193]);
- ***currently determined*** (Kruk, [0134] and [0077]);

- ***percentage factor, a percentage of optimization applied to the process parameter per optimization entity when more than one optimization entity is utilized*** (Kruk, [0120] and [0193]);
- ***an optimization value*** (Kruk, [0120] and [0193]);

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Kruk into the device of AOA. The modification would be obvious because one of the ordinary skill in the art would want to reduce expenses while generating revenue growth (Kruk, [0003]).

Neither AOA nor Kruk but Honarvar in an analogous art discloses ***automatically determining an optimization, a memory device configured to retain*** (Honarvar, abstract, col. 10 line 22-25 and col. 17 line 49-57).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the combination of devices of AOA and Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of AOA, Kruk or Honarvar but Kolk ***a reference time, a determined time, an optimization value integrated over a time period, an integrator configured to integrate a value over a time period*** (Kolk, [0009] and [0063]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Kolk into the combination of combination of devices of AOA, Kruk and Honarvar. The modification would be

obvious because one of the ordinary skill in the art would want to provide a real time estimation of actual cost savings during a selected period (Kolk, abstract).

None of AOA, Kruk, Honarvar or Kolk but Richards in an analogous art discloses ***a multiplier configured to apportion a difference between, a value provided by the multiplier, prior to supplying the difference to the multiplier*** (Richards, [0087] and Fig. 10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Richards into the combination of devices of AOA, Kruk, Honarvar and Kolk. The modification would be obvious because one of the ordinary skill in the art would want to provide buying information and recommendations to help consumers purchase products (Richards, [0012]).

As per claim 33, the rejection of claim 32 is incorporated, AOA further discloses the enterprise and production planning system is an ERP (enterprise resource planning) device, and wherein the monitoring and control system is a PLT (process instrumentation and control) device (AOA, Background of the invention [0003]).

13. Claim 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission (hereinafter "AOA"), in view of US 20030120528 to Kruk (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"),

in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), in view of US 20010039519 to Richards, further in view of US 20030088456 to Ernest et al. (hereinafter "Ernest").

As per claim 34, the rejection of claim 32 is incorporated, AOA further discloses monitoring and control system (AOA, [0003]). Kruk further discloses ***process parameter must be optimized*** (Kruk, [0120]), ***process parameter is influenced by one or more optimization entities*** (Kruk, [0120]), ***is assigned an evaluation entity such that the optimization which is effected on the relevant process parameter by the corresponding optimization entities can be determined by the evaluation entity*** (Kruk, [0181]), ***a value which is achieved by the relevant optimization entity can be determined online or in real time*** (Kruk, [0181], [0192], and [0194]).

None of AOA, Kruk, Honarvar, Kolk or Richards but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the combination of devices of AOA, Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

As per claim 35, the rejection of claim 32 is incorporated, Kruk further discloses the evaluation entity has at least one evaluation module for determining an value of a respective process parameter, said value is being achieved by a respective optimization entity (Kruk, [0120], [0180] and [0181]), where "which products and/or services to purchase from which suppliers" is the respective optimization entity as claimed.

Honarvar further discloses ***automatically determining an*** (Honarvar, abstract and col. 10 line 22-25).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the combination of devices of AOA and Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of AOA, Kruk, Honarvar, Kolk or Richards but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the combination of devices of AOA, Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

As per claim 36, the rejection of claim 32 is incorporated, AOA further discloses MES device (AOA, Background of the invention [0003]). Kruk further discloses ***all evaluation entities are connected to an overall evaluation entity, such that the effected overall optimization of all process parameters can be determined by the overall evaluation entity*** (Kruk, [0178], Fig. 15 element 602, [0192], and [0195]), ***can be determined online or in real time*** (Kruk, [0181], [0192], and [0194]).

Honarvar further discloses ***overall optimization of all process parameters*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62); ***overall value of the*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Honarvar into the combination of devices of AOA and Kruk. The modification would be obvious because one of the ordinary skill in the art would want to improve the performance of the strategy (Honarvar, col. 19 line 16-17).

None of AOA, Kruk, Honarvar, Kolk or Richards but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the combination of devices of AOA, Kruk, Honarvar, Kolk and Richards. The modification would be obvious because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

14. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Own Admission (hereinafter "AOA"), in view of US 20030120528 to Kruk (hereinafter "Kruk"), in view of US 6708155 to Honarvar et al. (hereinafter "Honarvar"), in view of US 20030139854 to Kolk et al. (hereinafter "Kolk"), in view of US 20010039519 to Richards, in view of US 20030088456 to Ernest et al. (hereinafter "Ernest"), further in view of US 20030061225 to Bowman et al. (hereinafter "Bowman").

As per claim 37, the rejection of claim 32 is incorporated, AOA further discloses the MES device (AOA, Background of the invention [0003]). ***Kruk further discloses the display entity displays the values which have been achieved by the relevant optimization entities*** (Kruk, [0178], Fig. 15 element 602, [0191], [0192], [0194] and [0195]); ***display simultaneously*** (Kruk, Fig. 15), where the savings for supplier A, supplier B, division A, etc. are displayed simultaneously; ***dynamic*** (Kruk, [0134]), where "real-time" inherently shows dynamic.

Honarvar further discloses ***overall value of the*** (Honarvar, col. 5 line 11-14 and col. 5 line 61-62).

None of AOA, Kruk, Honarvar, Kolk or Richards but Ernest in an analogous art discloses ***ROI (return of investment)*** (Ernest, [0010]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Ernest into the combination of devices of AOA, Kruk, Honarvar, Kolk and Richards. The modification

would be obvious because one of the ordinary skill in the art would want to make much more accurate determinations of return on investment (Ernest, [0010]).

None of AOA, Kruk, Honarvar, Kolk, Richards or Ernest but Bowman in an analogous art discloses **spider diagram** (Bowman, Fig. 69 and [0374]), where the "radar plot" is the spider diagram as claimed.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teaching of Bowman into the combination of devices of AOA, Kruk, Honarvar, Kolk, Richards and Ernest. The modification would be obvious because one of the ordinary skill in the art would want to provide a diagram where the user can change the order of the layers by selecting an item in the legend (Bowman, [0374]).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form 892.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON LIN whose telephone number is (571)270-3175. The examiner can normally be reached on Monday - Friday 9:30 a.m. - 6:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571)272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/JASON LIN/

Examiner, Art Unit 2121

/ALBERT DECADY/

Supervisory Patent Examiner, Art Unit 2121